

**Abstract of the Disclosure**

A signal source identification system and associated method are disclosed that utilize wavelet-based signal processing to facilitate signal source identification. In particular, the wavelet-based signal processing enables the extraction of fingerprint type signatures for signal sources using wavelet packet processing, and supplementary signal processing can be used to further enhance the accuracy of the system. This signal source identification system can be used for identifying signal sources within a received data signal, used for providing security features by verifying the identify of a transmitting device, and/or used in other environments where it is desirable to identify or differentiate among signal sources. Other features and variations can be implemented, if desired.